



EXTREME HEAT GUIDELINES



Material Title Touch Football Australia Extreme Heat Guidelines
Material Type Guidelines
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Version Number	Release Date	Amendments made (brief notes)	Authorised By	Archive Date
1	May 2022	First release	TFA Board	

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EXTREME HEAT GUIDELINES

Introduction

The new TFA Extreme Heat Guidelines utilise the latest published research evidence to inform:

- a. A biophysical model for predicting heat stress risk; and
- b. Recommend cooling strategies that can be used to optimally mitigate heat stress risk.

The new guidelines also adopt a continuous approach to defining heat stress risk thresholds in place of stepwise categories and covers gaps in the previous guidelines for conditions that often occur in many states and territories.

Disclaimer

The information in these guidelines is general. Reading or using these guidelines is not the same as getting medical advice from your doctor or health professional. All reasonable attempts have been made to ensure the information is accurate. However, TFA is not responsible for any loss, injury, claim or damage that may result from using or applying the information in these guidelines.

Reason for Guidelines

These guidelines have been adapted from the [Sports Medicine Australia Extreme Heat Policy](#) in conjunction with TFA Doctor Tane Eunson and TFA's Medical Coordinator Steve Cunningham and subsequently reviewed and endorsed by Mater Health.

Background

The SMA Policy provided recommendations for a range of sports based on participation rates from the 2019 AusPlay survey data. Touch Football is placed into **category 3** for the Sport Risk Classification based off the combined effects of exercise intensity and clothing/equipment worn. The new TFA guidelines seek to provide recommendations for Touch Football competitions and events.

Aim of the Guidelines

The aim of these guidelines is to provide evidence-based guidance for protecting the health of those participating in Touch Football from the potentially ill effects of extreme heat in the summer, while ensuring that play is not unnecessarily interrupted.

It is expected that participants, staff and volunteers take care when competing in high temperatures. At a bare minimum, competition staff should constantly remind players, officials and spectators about keeping hydrated before, during and after matches. Sun exposure also presents risk of sunburn and skin cancer, and needs to be managed with shaded areas, sunscreen and hats/clothes. Youth and the aged are particularly exposed to risks associated with sun exposure and hot weather.



USING THE NEW TFA EXTREME HEAT GUIDELINES

To predict the heat risk associated with participation in Touch Football, the temperature and humidity for the location where competition or practice will be taking place needs to be acquired.

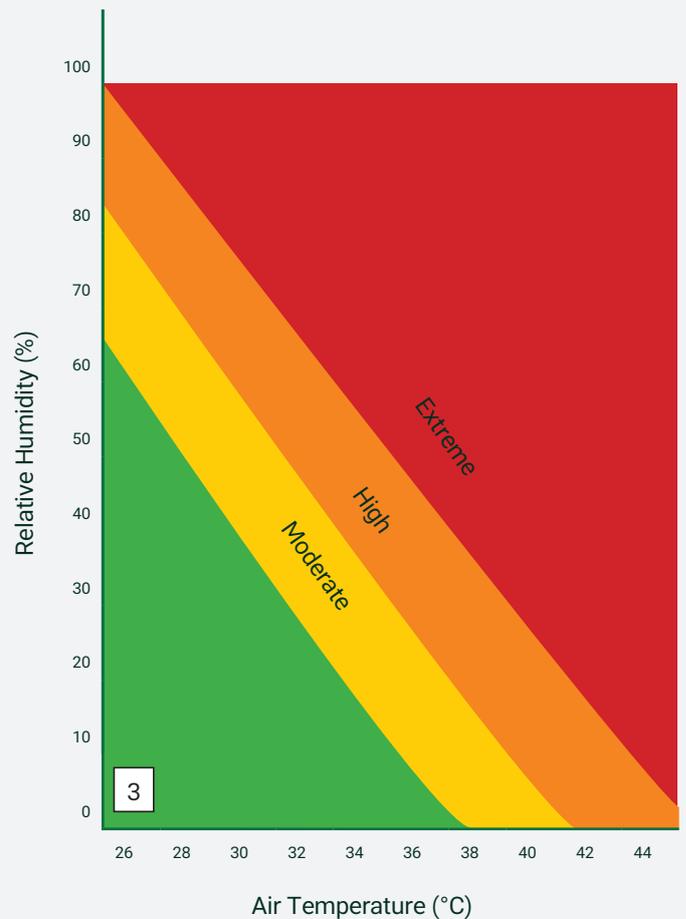
To obtain a forecast of temperature and humidity for the upcoming 72 hours:

1. Visit: <http://www.bom.gov.au/places/> and enter your location/post code.
2. Click on: "DETAILED 3-HOURLY FORECAST"
3. Select the specific day/date of enquiry
4. Identify the column with the nearest time to the planned competition/practice
5. Note the "Air Temperature (°C)" value
6. AND IN THE SAME COLUMN, note the concurrent "Relative Humidity (%)" value found towards the bottom of the entry for that date
7. The combined Air Temperature (x-axis) and Relative Humidity (y-axis) should then be plotted on the classification matrix. The point of intersection of these two values will subsequently fall in one of 4 coloured zones indicating a given level of heat stress risk.

NOTE: Reported temperatures and humidity values will only be estimates. The most accurate conditions can be measured locally with devices such as the Environmental Measurement Unit (EMU) from The University of Sydney. The combined Air Temperature (x-axis) and Relative Humidity (y-axis) should then be plotted on the appropriate figure for your specific sport. The point of intersection of these two values will subsequently fall in one of 4 coloured zones indicating a given level of heat stress risk:

SPORT RISK CLASSIFICATION 3

- GREEN:** Low Risk
- YELLOW:** Moderate Risk
- ORANGE:** High Risk
- RED:** Extreme Risk



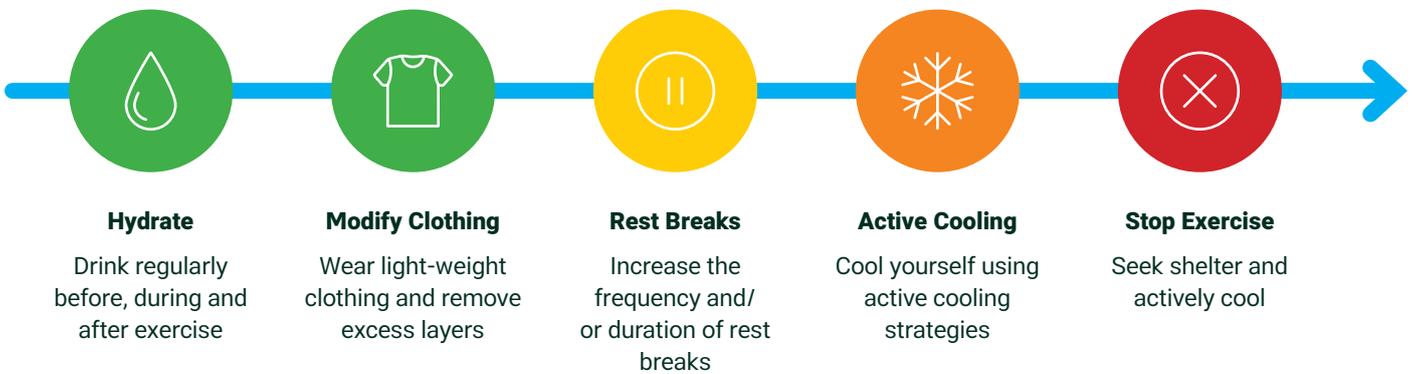
Important: ensure that the RH value used occurs all the same time as the temperature used. *

NB: Peak RH values DO NOT usually occur at the same time as peak temperature

MITIGATING HEAT STRESS RISK

Accompanying each rating are recommended actions that can be taken to mitigate the prevailing heat stress risk:

AT A GLANCE - MITIGATING HEAT STRESS RISK



The specific heat stress mitigation strategy used depends on the type of sporting activity, however general recommendations that can be implemented across most sports are detailed below.

Plan ahead to ensure you are able take the most appropriate precaution to stay safe when exercising in the heat.

GREEN: Hydrate and Modify Clothing

When heat stress risk is low, maintaining hydration through regular fluid consumption and modifying clothing is still a simple, yet effective, way of keeping cool and preserving health and performance during the summer months.

You should:

- Ensure pre-exercise hydration by consuming 6 ml of water per kilogram of body weight every 2-3 hours before exercise. For a 70kg individual, this equates to 420ml of fluid every 2-3 hours (a standard sports drink bottle contains 500ml).
- Drink regularly throughout exercise. You should aim to drink enough to offset sweat losses, but it is important to avoid over-drinking because this can also have negative health effects. To familiarise yourself with how much you typically sweat, become accustomed to weighing yourself before and after practice or competition.

The clothing/equipment you wear can influence how quickly you heat-up during exercise.

Simple clothing modifications can help to keep you cool.

You should:

- Where possible, select light-weight and breathable clothing with extra ventilation
- Remove unnecessary clothing/equipment and/or excess clothing layers
- Reduce the amount of skin that is covered by clothing – this will help increase your sweat evaporation, which will help you dissipate heat.

NOTE: Sunscreen does NOT impede sweating or affect heat loss from the skin. Sunscreen should be applied regularly, as per instructions, to avoid sunburn.



MITIGATING HEAT STRESS RISK

YELLOW: Rest Breaks During Training

When the heat stress risk is moderate, increasing the frequency and/or duration of your rest breaks during training is an effective way of reducing your risk for heat illness even if minimal resources are available.

- During training sessions, provide a minimum of 15 minutes of rest for every 45 minutes of practice.
- Extend scheduled half time breaks to 10 minutes.
- During all breaks in play or practice, everyone should seek shade – if natural shade is not available, portable sun shelters should be provided, and water freely available.

NOTE: While hats provide UV protection, they provide minimal protection against the heat.

ORANGE: Active Cooling and Quarters

When the heat stress risk is high, active cooling strategies should be applied during scheduled and additional rest breaks or before and during activity if play is continuous. Below are strategies that have been shown to effectively reduce body temperature. The suitability and feasibility of each strategy will depend on the location of your activity.

- For matches played in halves, Implement quarter time breaks of three to five minutes mid-way through each half.
- Submerging your arms/feet in cold water;
- Water dousing – wetting your skin with cool water using a sponge or a spray bottle helps increase evaporation, which is the most effective cooling mechanism in the heat;
- Ice packs/towels – placing an ice pack or damp towel filled with crushed ice around your neck; and
- Electric (misting) fans – outdoor fans can help keep your body cool, especially when combined with a water misting system

NOTE: The application of substances such as menthol to the skin can induce a cool sensation, but they do not physically cool the body and therefore do not lower the risk of heat related illness.

RED: Stop Exercising

When the heat stress risk is extreme, tournament control should make considerations that play is suspended. If play has commenced, then consideration must be given that all activities should be stopped as soon as possible.

- All players should seek shade or cool refuge in an air-conditioned space if available
- Active cooling strategies should be applied

A common sense approach must be applied by tournament control in relation to the conditions being outside of the common occurrences for the location of the event.



WHO IS ESPECIALLY AT RISK OF HEAT-RELATED ILLNESS?

While even the fittest athlete can fall victim to heat-related illness, certain people are especially vulnerable:

- Aged over 65 years, especially if unfit. Note that age effects on thermoregulation may become progressively worse with age, so risk is generally greater with more advanced age
- Heart or kidney disorders / disease presents a greater risk of cardiovascular or renal failure during or following exercise in the heat
- Recently sick with a fever
- Taking prescription medications that impair sweating
- A reduced ability to behaviourally respond to heat, e.g. due to mental health challenges or substance abuse
- Very high body fat
- Recently (in the past week) arrived from a cold climate

NOTE: It is currently unclear if heat stress risk is truly elevated in children. Similarly, some reports indicate that pregnant women exposed to extreme heat may be at elevated risk negative birth outcomes, but no evidence links this with exercise, which is known to provide extensive benefits to mother and baby. Thermoregulatory capacity during pregnancy is also not compromised.

	Heat Exhaustion / Syncope	Exertional Heat Stroke (EHS)
Symptoms (what the person might feel)	<ul style="list-style-type: none"> • Headache • Dizziness • Weakness • Vomiting 	<ul style="list-style-type: none"> • Brain symptoms including: <ul style="list-style-type: none"> - Confusion - Agitation • Symptoms can develop rapidly • EHS is a medical emergency
Signs (what you might see)	<ul style="list-style-type: none"> • Fainting • Elevated heart rate • Low blood pressure • Core temperature usually <40°C • Absence of brain symptoms 	<ul style="list-style-type: none"> • Brain symptoms including: <ul style="list-style-type: none"> - Confusion - Aggressive or irrational behaviour - Altered level of consciousness, seizures, coma • Elevated heart rate • Elevated breathing rate • Low blood pressure • Core temperature usually >40°C
Immediate management	<ul style="list-style-type: none"> • Move to shade and cool • Remove as much clothing as possible • Apply lots of water to skin • Oral fluids • Lie on back with legs elevated • Watch for deteriorating condition 	<ul style="list-style-type: none"> • ABC (airways, breathing, circulation) • Aggressively cool the body with ice and water • Call ambulance • Continue cooling while transferring to hospital <ul style="list-style-type: none"> - Cool first, transport second

